

PIPEWORK

- STW STORMWATER
- SS SUBSOIL
- DP DOWNPIPE
- RD ROOF DRAINAGE
- EXISTING SERVICE
- EXISTING SERVICE TO BE DISCONNECTED AND REMOVED

PIPEWORK SYMBOLS

- R RISER
- D DROPPER
- COF CAPPED OFF
- HP HORIZONTAL PENETRATION
- DOF DIRECTION OF FLOW
- NC NEW CONNECTION
- C CONTINUATION
- MH MAN HOLE
- IO CLEAR OUT
- STWKP STORMWATER KERB INLET PIT
- STWIP STORMWATER INLET PIT
- GRD GRATED DRAIN
- SO SAFETY OVERFLOW
- SP SPREADER
- RWO RAINWATER OUTLET
- BRWO BALCONY RAINWATER OUTLET
- PRWO PLANTER RAINWATER OUTLET
- SRWO SPOON DRAIN RAINWATER OUTLET

ABBREVIATIONS

- FFL FINISH FLOOR LEVEL
- IL INVERT LEVEL
- RL REDUCED LEVEL
- UPVC UNPLASTICIZED POLYVINYL CHLORIDE
- NTS NOT TO SCALE
- UNO UNLESS NOTED OTHERWISE
- SQ SQUARE
- mm MILLIMETRES
- m METRES
- m2 SQUARE METRES
- m3 CUBIC METRES
- /sec PER SECOND
- MIN MINIMUM
- MAX MAXIMUM
- APPR APPROXIMATLY
- DIA DIAMETER
- EX EXISTING
- AHD AUSTRALIAN HEIGHT DATUM

STORMWATER

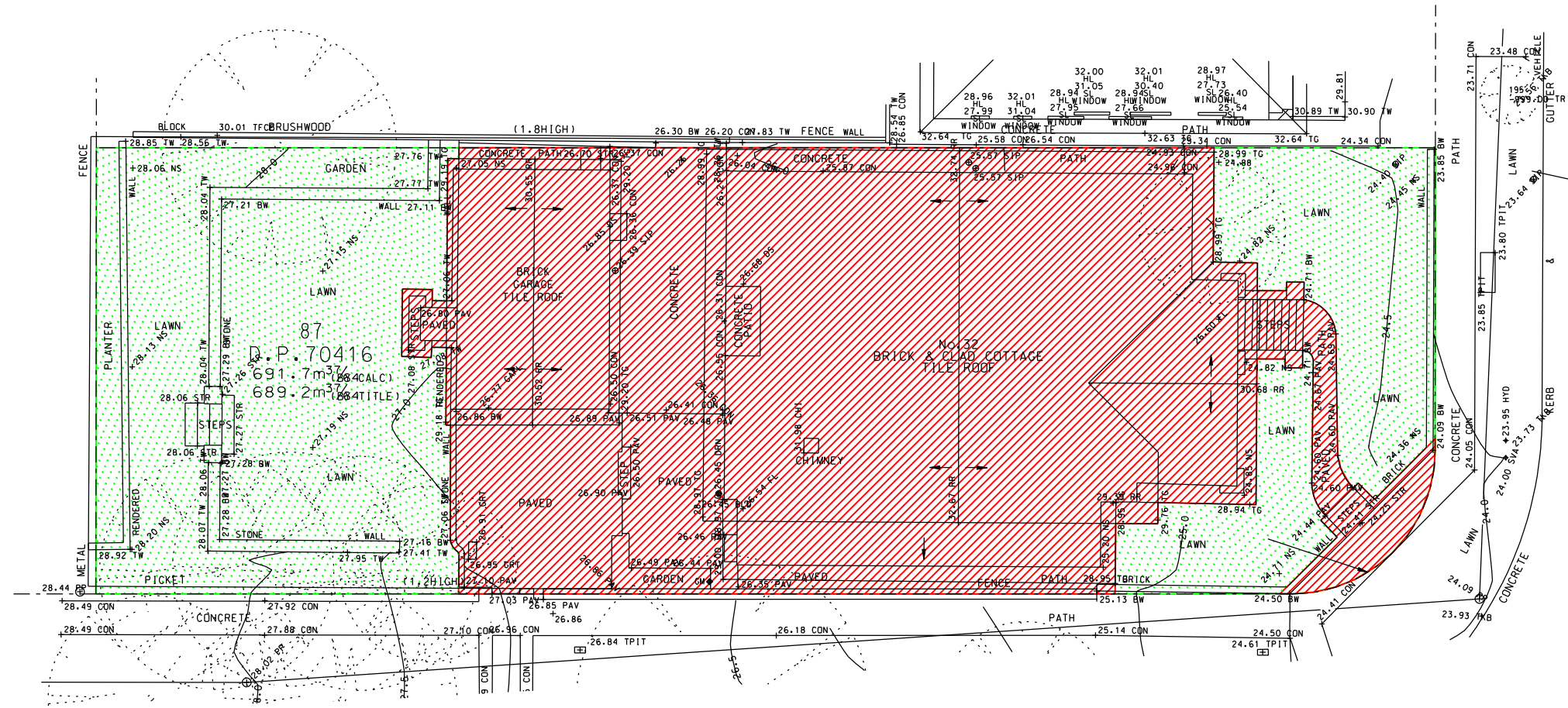
GENERAL NOTES
ALL IN ACCORDANCE WITH COUNCIL'S STORMWATER REQUIREMENTS

PIPEWORK DESIGN
ALL PIPEWORK IS SIZED AND DESIGNED TO HANDLE A 1:100 YEAR EVENT RAINFALL

PIPEWORK
ALL PIPEWORK TO BE 100mm @ 1% FALL (UNO)

STORMWATER PIT SIZES

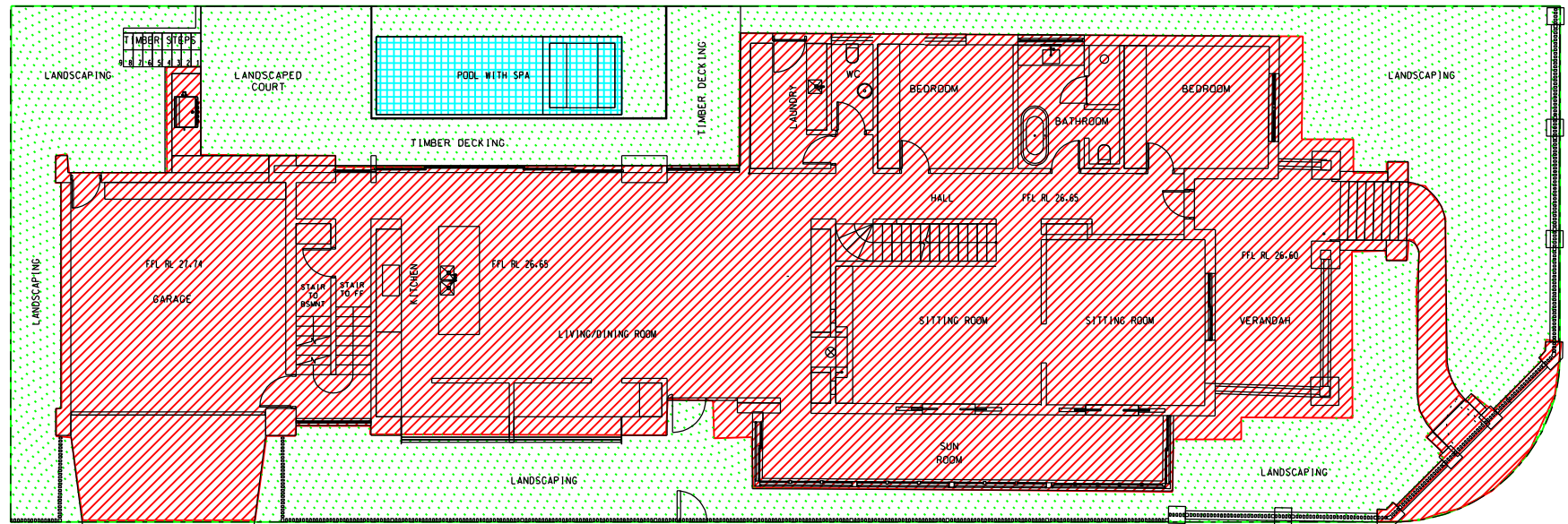
MINIMUM INTERNAL MEASUREMENTS:			
DEPTH TO BASE OF CHAMBER	RECTANGULAR		CIRCULAR
	WIDTH	LENGTH	
SWALLER THAN 600	450	450	600
601 TO 900	600	600	900
901 TO 1200	600	900	1050
GREATER THAN 1200	900	900	1050



SYMBOL	CATCHMENT	IMPERVIOUS AREA	PERVIOUS AREA	PERCENTAGE
[Red hatched box]	ROOF AND PAVED AREAS	424.5m2	-	61.4%
[Green hatched box]	LANDSCAPING	-	267.2m2	38.6%
TOTAL		691.7m2		100%

PRE DEVELOPED CATCHMENT AREAS

ON SITE DETENTION				
ALL ACCORDANCE WITH NORTHERN BEACHES STORMWATER REQUIREMENTS (OLD MANLY COUNCIL STORMWATER POLICY): ALTERATIONS AND ADDITIONS (EXISTING SINGLE DWELLING) NO ON SITE DETENTION IS REQUIRED WHERE THE INCREASE IN IMPERVIOUS AREAS IS LESS THAN 50.0m2 AND THE TOTAL IMPERVIOUS AREAS ARE LESS THAN 60.0% OF THE TOTAL SITE AREA 10.9m2 DECREASE IN IMPERVIOUS AREAS TOTAL IMPERVIOUS AREAS: 59.8% OF THE TOTAL SITE AREAS SUBSEQUENTLY ON SITE DETENTION IS NOT REQUIRED				

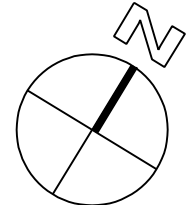


SYMBOL	CATCHMENT	IMPERVIOUS AREA	PERVIOUS AREA	PERCENTAGE
[Red hatched box]	ROOF & PAVED AREAS	413.6m2	-	59.8%
[Green hatched box]	LANDSCAPING	-	261.4m2	37.8%
[Blue hatched box]	POOL	16.7m2		2.4%
TOTAL		691.7m2		100%

POST DEVELOPED CATCHMENT AREAS

APPROVAL

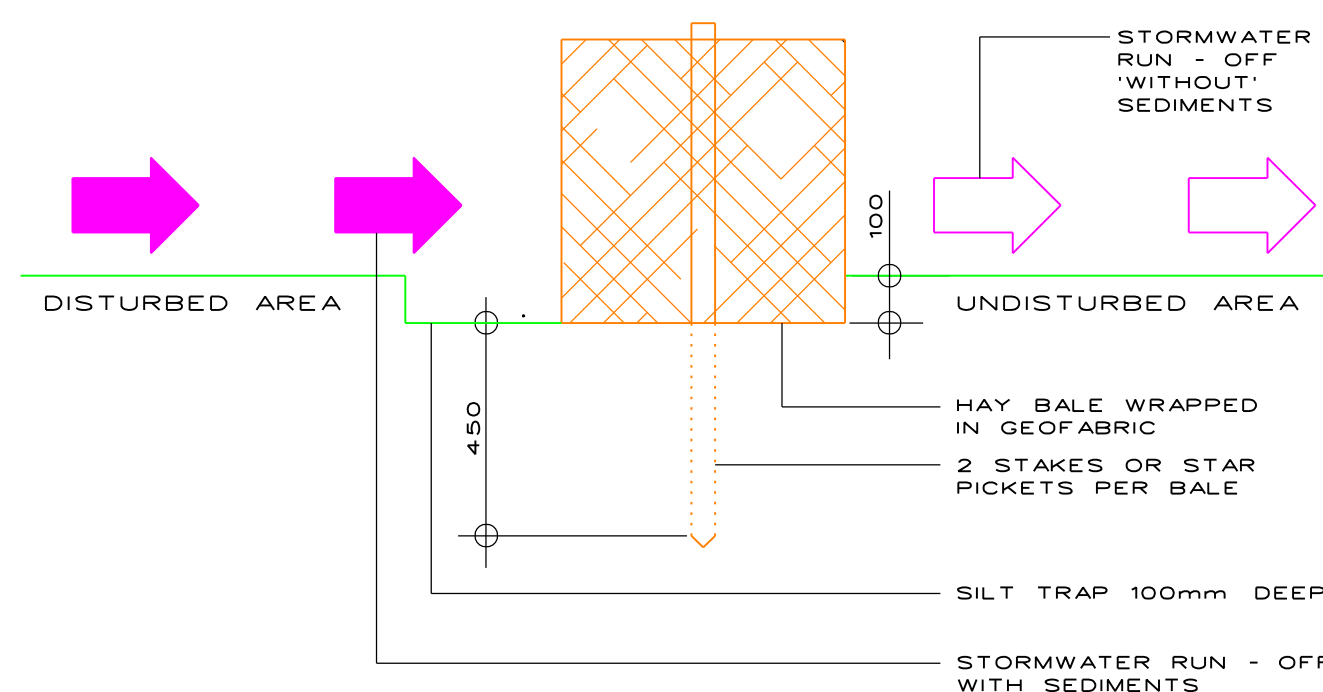
CLIENT STEVE THOMAS	ARCHITECT EATON ARCHITECTS	PROJECT 32 REDDALL STREET MANLY	DRAWING TITLE LEGEND, NOTES & CATCHMENT CALCULATIONS	
PROJECT MANAGER ALL IN PROJECT MANAGEMENT	itmdesign consulting hydraulic engineers unit 6 / 3 apollo st, warriewood nsw 2102 po box 1438 mono vale nsw 1660 tel:(02) 9997 1566 fax (02) 9997 3266 email: markus@itmdesign.com.au	SCALE 1:200 @ A1 / 1:400 @ A3	JOB No 18/145	
		DISCIPLINE HYD	DRAWING No H-DA2-00	REVISION A



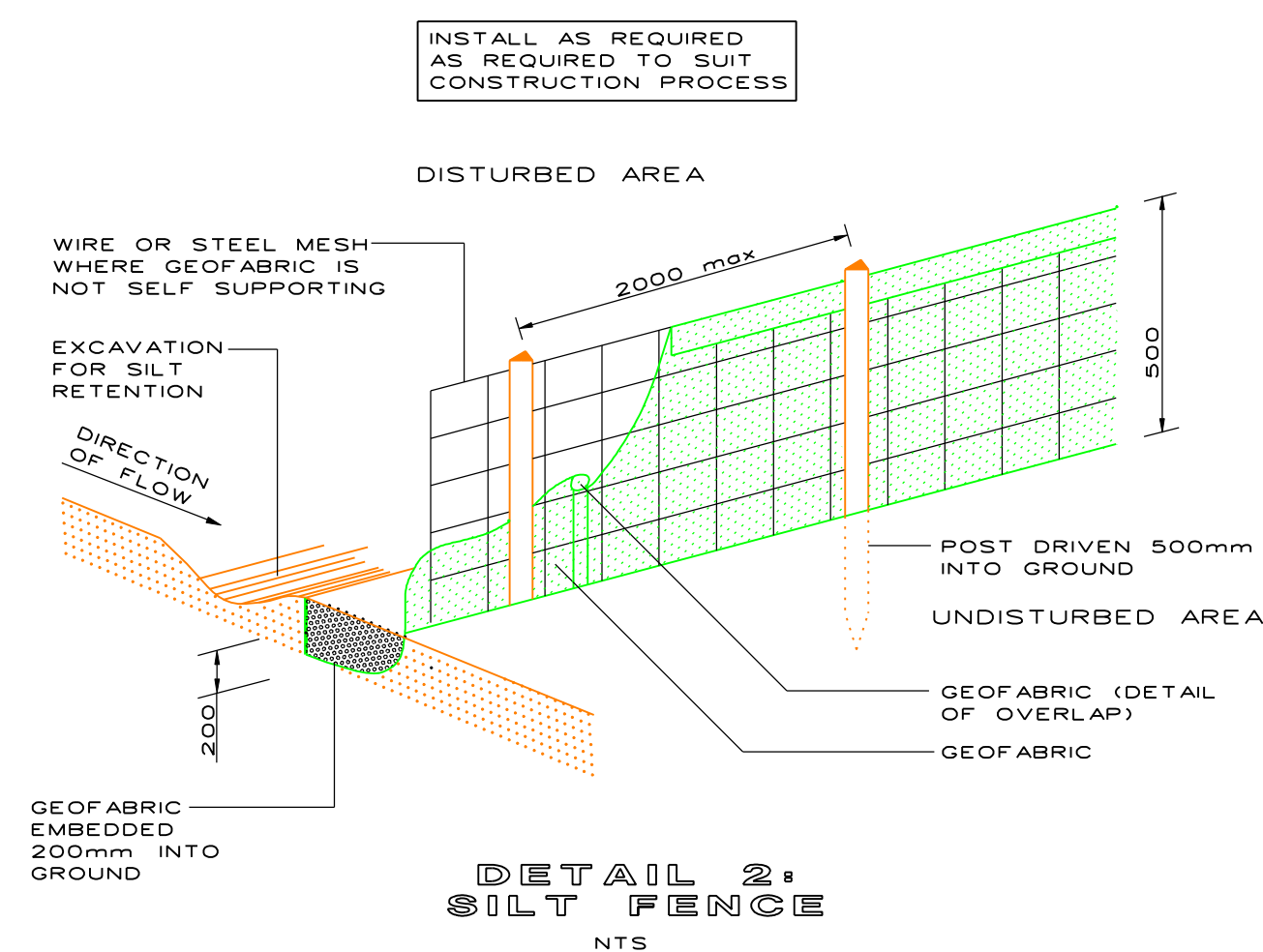
- NOT FOR CONSTRUCTION
- FINAL LOCATION OF ALL DOWNPIPES, PITS, RAINWATER OUTLETS AND SUBSOIL PIPES TO BE CONFIRMED DURING CONSTRUCTION

CERTIFICATE STAGE OF THE PROPOSED DEVELOPMENT

NOTES
FOR GENERAL NOTES AND LEGEND
REFER TO DRAWING H - DA - 00



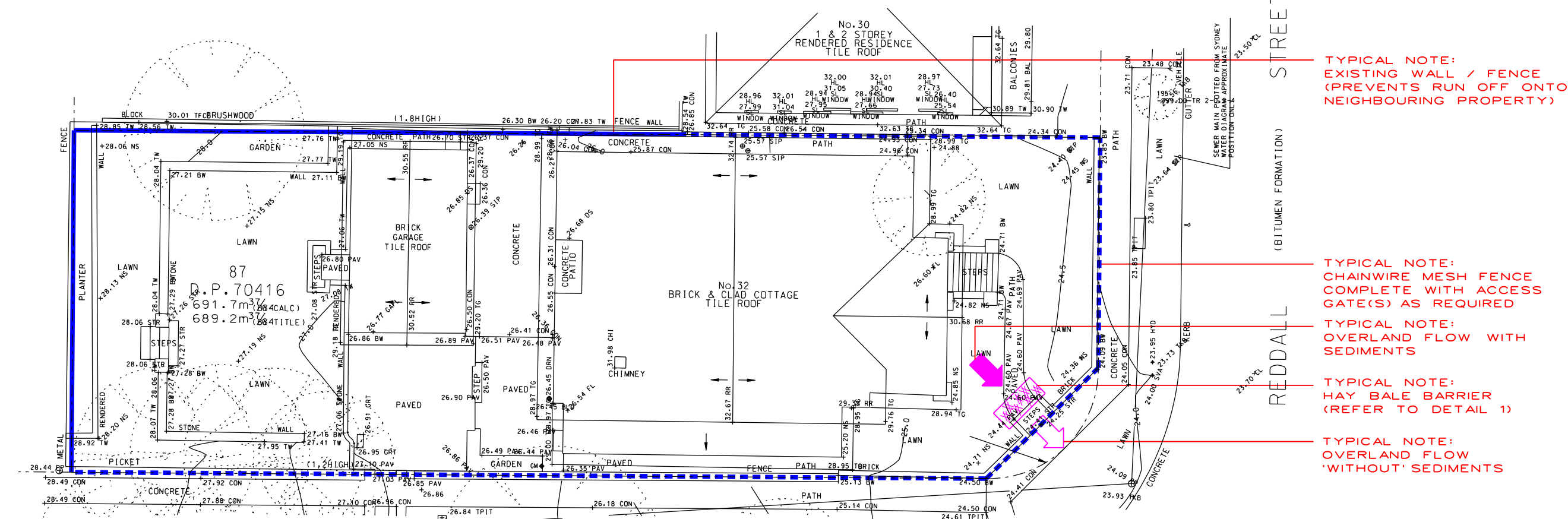
HAY DETAIL 1:
BALE BARRIER
NIS



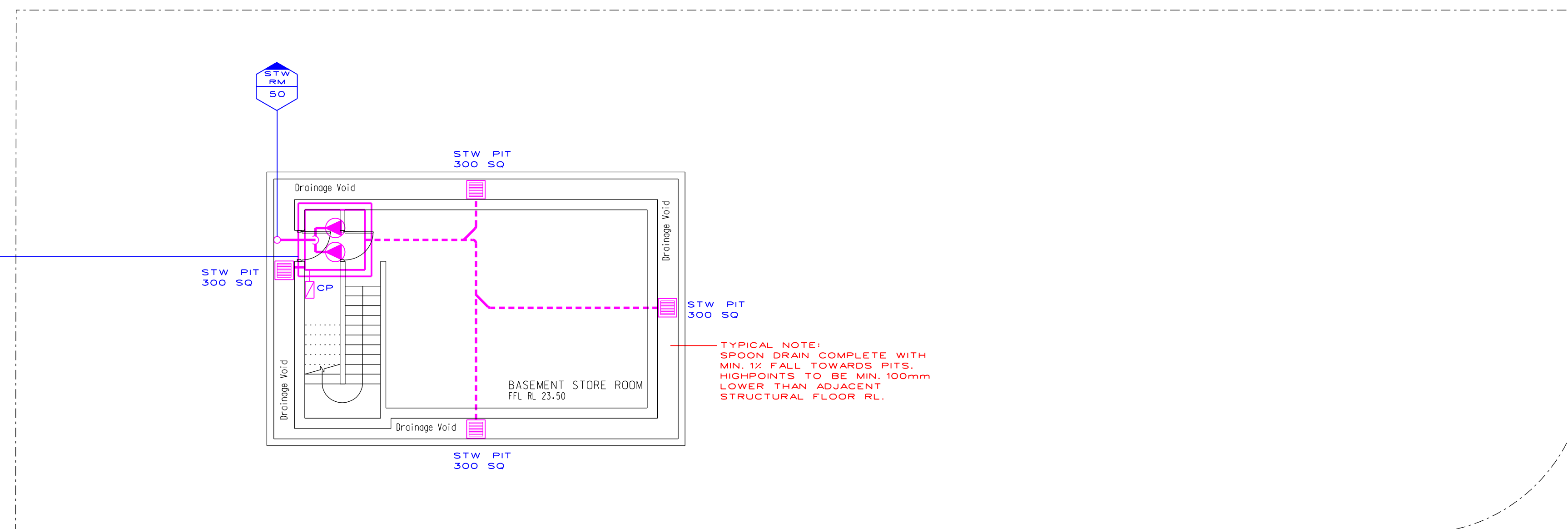
STORMWATER PUMP OUT PIT COMPLETE WITH
DUAL PUMPS
- LOCKED INLET / ACCESS GRADE (600 SQ
- CONTROL PANEL
- ADDED HIGH LEVEL ALARM
- 1 WATERCUTTING PUMP
- PUMP DUTY: 5.0 ltrs / sec @ 5mHEAD
(EACH PUMP)
PIT WATERCUTTING / CONSTRUCTION TO BE CO-
ORDINATED WITH STRUCTURAL &
GEOTECHNICAL ENGINEERS. PAY SPECIAL
ATTENTION TO GROUNDWATER PRESSURE
AND POSSIBLE 'UPLIFT'.

PIT SIZE:
- NO AREAS 'OPEN TO THE SKY' ARE
DISBURSING - THE PIT PUMP
- ASSUMED SEEPAGE INFLOW RATE:
0.3 ltrs / sec (TO BE VERIFIED DURING
CONSTRUCTION)
- EMERGENCY STORAGE REQUIRED FOR
THE FOLLOWING DURATION (ASSUMING
DUAL PUMPS MAX FUNCTION AND OR
THERE IS A BACKOUT): 2 HOURS + 2.6m.
- AS 25.0% MIN. REQUIRED PIT
CAPACITY = 3.0m3

SUGGESTED PIT SIZE:
1.75m x 1.75m x 1.0m EFFECTIVE DEPTH
COMPLETE WITH 0.9m SQ x 0.2m D SUMP
TO



SEDIMENTATION CONTROL DURING CONSTRUCTION
1:200 @ A1 / 1:400 @ A3



BASEMENT - STORMWATER DRAINAGE
1:100 @ A1 / 1:200 @ A3

APPROVAL

A	ISSUED FOR DA	24.02.21
REV	DESCRIPTION	DATE

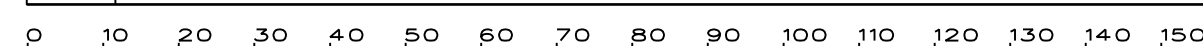
CLIENT	STEVE THOMAS
PROJECT MANAGER	ALL IN PROJECT MANAGEMENT

ARCHITECT
EATON ARCHITECTS

itmdesign itd
consulting hydraulic engineers
unit 6 / 3 apollo st, warriewood nsw 2102
po box 1438 mono vale nsw 1660
tel (02) 9997 1566 fax (02) 9997 3266
email: markus@itmdesign.com.au

PROJECT
32 REDDALL
STREET
MANLY

DRAWING TITLE		JOB No	
SED. CONTROL & BASEMENT STORM WATER		18 / 145	
SCALE		JOB No	
AS SHOWN		18 / 145	
DISCIPLINE	DRAWING No	REVISION	
HYD	H-DA2-01	A	

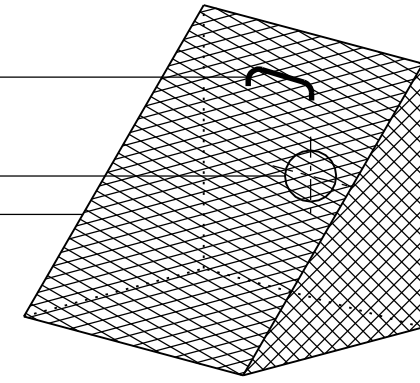
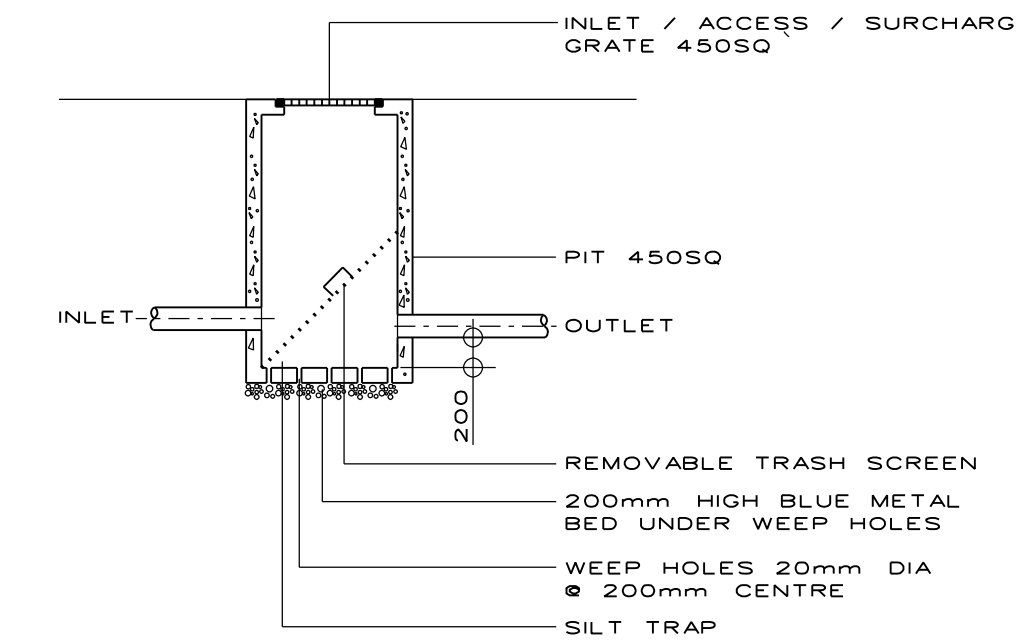


D

- NOT FOR CONSTRUCTION
- FINAL LOCATION OF ALL DOWNPIPES, PITS, RAINWATER OUTLETS AND SUBSOIL PIPES TO BE CONFIRMED DURING CONSTRUCTION CERTIFICATE STAGE OF THE PROPOSED DEVELOPMENT

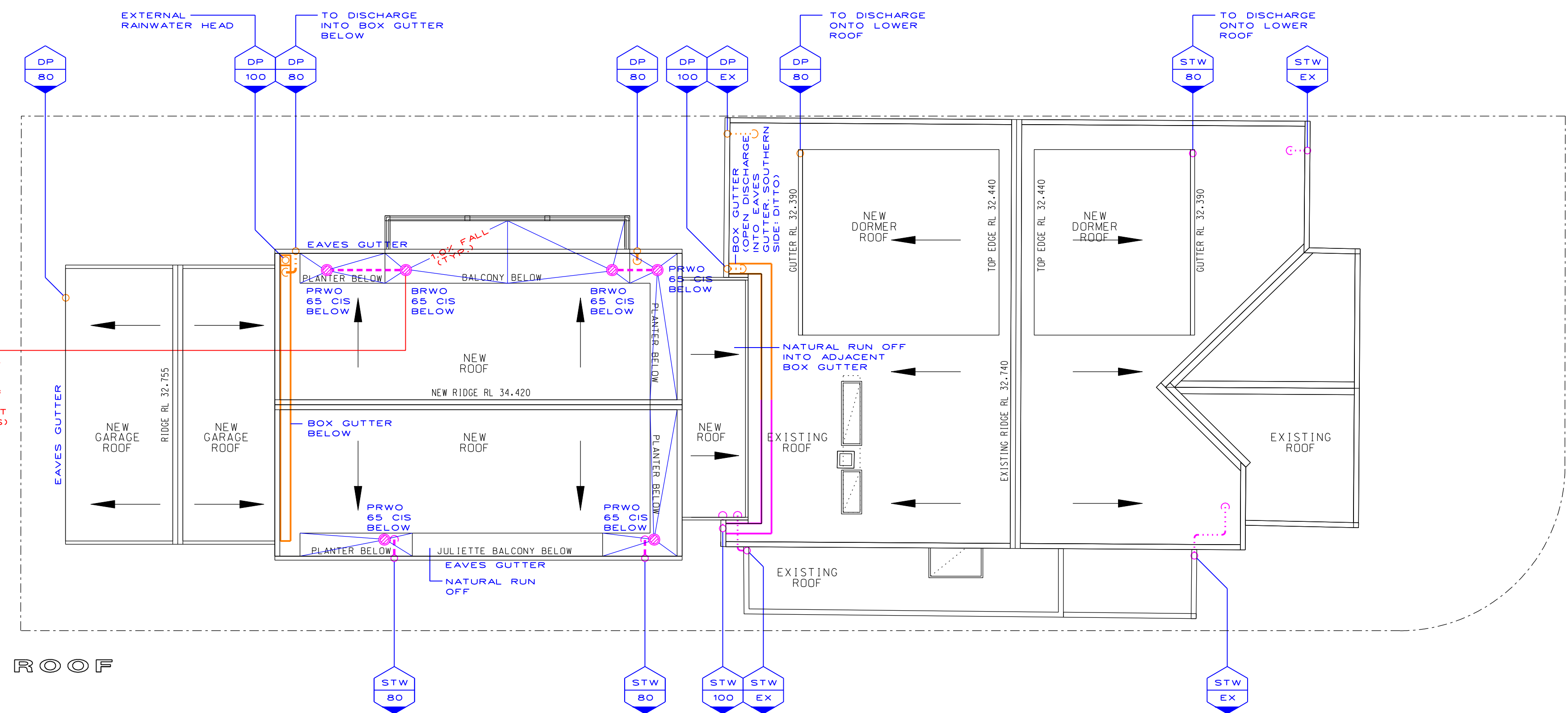
ALL LANDSCAPED AREAS LOCATED ABOVE CONCRETE SLABS
TO BE EQUIPPED WITH WATERPROOFING MEMBRANE,
DRAINAGE CELL AND GEOFABRIC

DURING DEMOLITION / CONSTRUCTION: ALLOW TO INVESTIGATE EXACT LOCATION, SIZE AND CONDITION OF ALL DRAINAGE PIPES. LIAISE WITH itm design TO DISCUSS THE FINDINGS. ALLOW TO REPLACE / UPGRADE AS REQUIRED.

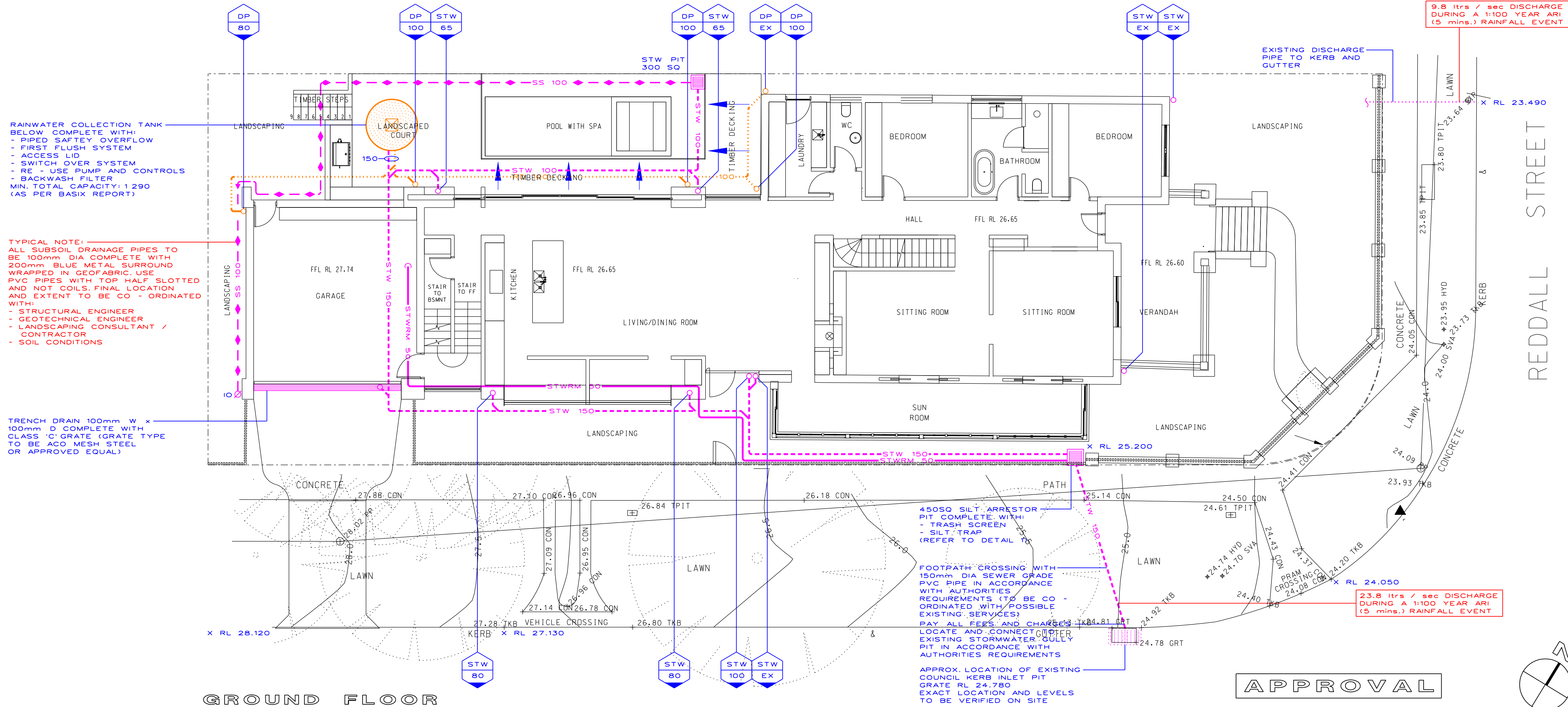


DETAIL 1:
SILT ARRESTOR PIT
& TRASH SCREEN
NTS

TYPICAL NOTE: —
ALL BALCONY RAINWATER OUTLETS
TO BE SPS 100 / 65 ROUND
MULTIPURPOSE DRAIN (OR
APPROVED EQUAL) COMPLETE WITH:
- 100mm DIA GRATE
- 65mm DIA DISCHARGE PIPE (CAST
INTO SLAB WHERE INDICATED C/S)



NOT SHOWN



APPROVAL

A	ISSUED FOR DA	24.02.21
REV	DESCRIPTION	DATE

CLIENT STEVE THOMAS	ARCHITECT EATON ARCHITECTS	PROJECT 32 REDDALL STREET	DRAWING TITLE GROUND FLOOR & ROOF STORMWATER DRAINAGE
PROJECT MANAGER ALL IN PROJECT MANAGEMENT	 consulting hydraulic engineers unit 6 / 3 apollo st, warriewood nsw 2102 po box 1438 manly vale nsw 1560 tel(02) 9997 1566 fax (02) 9997 3266 email: markus@itmdesign.com.au	MANLY	SCALE 1:100 @ A1 / 1:200 @ A3 JOB No 18/145
		DISCIPLINE HYD	DRAWING No H-DA2-02 REVISION A